

CLAIMS

1 – RF bandpass filter with pseudo-elliptic response, of the type comprising a waveguide (301) furnished with an insulating substrate (302)

5 placed in an E-plane of the guide and comprising on one of its faces inductive conducting inserts (303-306) connected electrically to the internal faces of the guide which support the substrate and which through their dimensions and their locations on the substrate determine a Chebyshev type filter response curve, characterized in that it furthermore comprises at least
10 one electrically floating insert (314) placed on the other face of the substrate and which through its dimensions and its location on the substrate determines a transmission zero in the response curve of the filter making it possible to attenuate the frequencies situated in the vicinity of this zero and determining the pseudo-elliptic nature of the response curve of the filter.

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2 – Filter according to claim 1, characterized in that it comprises a set of floating inserts (314-315) determining a set of transmission zeros.

20 3 – Filter according to any one of claims 1 and 2, characterized in that the number of floating inserts (314-315) is equal to the number of conducting inserts (303-306).

25 4 – Filter according to any one of claims 1 to 3, characterized in that each floating insert (314-315) is placed opposite a conducting insert (303-306).

5 – Filter according to any one of claims 1 to 4, characterized in that the waveguide (301) is of rectangular cross section and that the substrate (302) is placed in a median longitudinal position in this guide.

6 – Filter according to one of claims 1 to 5, characterized in that each inductive insert is connected electrically to two opposite sides of the waveguide.

5 7 – Filter according to any one of claims 1 to 6, characterized in that it is adapted to operate in a millimetre wave range.